

WHAT IS CLAIMED:

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1 1. A liner for a shaped charge comprising:
2 a mixture of powdered heavy metal and powdered binder metal formed into a rigid body
3 wherein
4 the percentage of heavy metal in the mixture is within a range of approximately 90.0% to
5 99.98% by weight.

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1 2. A liner for a shaped charge according to claim 1 wherein
2 the heavy metal powder is chosen from the group consisting of tungsten, tantalum, hafnium,
3 silver, gold, platinum, copper, or any mixture thereof.

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1 3. A liner for a shaped charge according to claim 1 wherein
2 the heavy metal consists essentially of tungsten.

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1 4. A liner for a shaped charge according to claim 1 wherein
2 the percentage of heavy metal in the mixture is within a range of approximately 99.0% to
3 99.98% by weight.

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1 5. A liner for a shaped charge according to claim 1 wherein
2 the binder metal is chosen from the group consisting of copper, lead, zinc, tin, and bismuth.

6. A liner for a shaped charge according to claim 1 wherein
the binder metal consists essentially of lead.

7. A liner for a shaped charge according to claim 1 wherein
the mixture further comprises approximately 0.02% to 1.0% lubricant by weight.

8. A liner for a shaped charge according to claim 7 wherein
the lubricant comprises powdered graphite.

9. A liner for a shaped charge according to claim 7 wherein
the lubricant comprises oil.

10. A liner for a shaped charged according to claim 1 wherein
the percentage of heavy metal in the mixture is approximately 93.0%..

11. A liner for a shaped charge comprising:
heavy metal powder, coated with a binder metal, formed into a rigid body.

12. A liner for a shaped charge according to claim 11 wherein
the heavy metal powder is chosen from the group consisting of tungsten, tantalum, hafnium,
platinum, silver, gold, copper, or any mixture thereof.

1 13. A liner for a shaped charge according to claim 11 wherein

2 the heavy metal comprises tungsten.

1 14. A liner for a shaped charge according to claim 11 wherein

2 the binder metal is chosen from the group consisting of copper, tin, zinc, lead, bismuth or

3 any mixture thereof.

1 15. A liner for a shaped charge according to claim 11 wherein

2 the percentage of heavy metal in the heavy metal powder is within a range of approximately

3 90.0% to 99.98% by weight.

1 16. A liner for a shaped charge according to claim 11 wherein

2 the percentage of heavy metal in the heavy metal liner is approximately 93.0%..

1 17. A liner for a shaped charge according to claim 11 wherein

2 the percentage of heavy metal is within a range of approximately 99.0% to 99.98% by

3 weight.

1 18. A liner for a shaped charge according to claim 11 wherein

2 the heavy metal powder, coated with binder metal, is mixed with approximately 0.02% -

3 1.0% lubricant by weight.

1 19. A liner for a shaped charge according to claim 18 wherein
2 the lubricant comprises powdered graphite.

1 20. A liner for a shaped charge according to claim 18 wherein
2 the lubricant comprises oil.

1 21. A liner for a shaped charge comprising:
2 a mixture of powdered heavy metal, powdered metal binder, and a heavy metal powder
3 coated with a binder metal formed into a rigid body.

1 22. A liner for a shaped charge according to claim 21 wherein
2 the rigid body is substantially conical.

1 23. A liner for a shaped charge according to claim 21 wherein
2 the rigid body is substantially conical.

1 24. A liner for a shaped charge according to claim 21 wherein
2 the rigid body is substantially conical.

1 25. A liner for a shaped charge according to claim 21 wherein
2 the percentage of heavy metal in the mixture is within a range of approximately 90.0% to
3 99.98% by weight.

1 26. A liner for a shaped charge according to claim 21 wherein
2 the percentage of heavy metal in the mixture is approximately 93.0%.

1 27. A liner for a shaped charge according to claim 21 wherein
2 the heavy metal powder is chosen from the group consisting of tungsten, tantalum, hafnium,
3 silver, gold, platinum, copper, or any mixture thereof.

1 28. A liner for a shaped charge according to claim 21 wherein
2 the heavy metal consists essentially of tungsten.

1 29. A liner for a shaped charge according to claim 21 wherein
2 the percentage of heavy metal in the mixture is within a range of approximately 99.0% to
3 99.98% by weight.

1 30. A liner for a shaped charge according to claim 21 wherein
2 the binder metal is chosen from the group consisting of copper, lead, zinc, tin, and bismuth.

1 31. A liner for a shaped charge according to claim 21 wherein
2 the binder metal consists essentially of lead.

1 32. A liner for a shaped charge according to claim 21 wherein
2 the mixture further comprises approximately 0.02% to 1.0% lubricant by weight.

33. A liner for a shaped charge according to claim 21 wherein
the lubricant comprises powdered graphite. . .

34. A liner for a shaped charge according to claim 21 wherein
the lubricant comprises oil

35. A liner for a shaped charge according to claim 21 wherein
the mixture is compressively formed

36. A liner for a shaped charge according to claim 1 wherein
the mixture is compressively formed.

37. A liner for a shaped charge according to claim 11 wherein
The mixture is compressively formed.